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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,643	04/25/2000	Shulong Li	2129A	9252

7590

04/22/2003

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EXAMINER

SINGH, ARTI R

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

<b>Office Action Summary</b>	<b>Application No.</b> 09/557,643	<b>Applicant(s)</b> LI, SHULONG	
	<b>Examiner</b> Ms. Arti Singh	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed on 02/21/2003. Applicant's amendments to the specification and claims have been entered. Applicant's amendment to update the continuity data in the first paragraph and throughout the specification overcomes the objections made in paragraphs 2 and 6 of the previous office action. Applicant's amendment to the specification to correct the minor informalities, and correction to the trademark/tradenames, also overcomes the objections made in paragraphs 4, 5, and 7 of the previous office action. The rejection made under 35 U.S.C. 112-2 (Ex Parte Slob) in paragraph 9 has also been overcome as Applicant has amended the claim so that it now has structure and no longer just recites intended properties that were desired by the product, and is thus withdrawn. Despite these advances, the amendments are not found to patentably distinguish the claims over the prior art do not however overcome the rejections made in paragraphs 11 (35 U.S.C. §102 (e)), 12 (§ 102 (b)) and the double patenting rejections made in paragraphs 14 and 15 of the previous office action and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below, and are thus maintained.

***Response to Arguments***

2. Applicant's arguments filed 02/21/2003 have been fully considered but they are not persuasive. With regard to Applicant's first argument that the rejection made over claims 1-17 under 35 U.S.C. § 102 (e) as being anticipated by Li et al. (USPN 5,945,186) as well as claims 1-6 and 8-17 under 102 (b) as being anticipated by Menzel et al. (USPN 5,110,666), Applicant disagrees with both rejections, in that they do not teach a side curtain airbag and that there is a vast difference between the various types of airbags that are currently present

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in the industry. To this the Examiner agrees that in the airbag industry there are several different types of airbags, i.e. driver side, passenger side and side curtain airbag being the more generic of the lot and that the difference between them lies within the level of coating applied on the fabric substrate, which in turn controls the permeability or rather impermeability of the composite structure. Applicant further argues that neither patent teaches the third kind of airbag, i.e. the side curtain or roll-over type airbag wherein the inflated structure must stay inflated, thus having very little to no permeability. In regard to the Li et al patent, Applicant is incorrect in their deduction as Li et al. specifically disclose in column 3, lines 8-11, that *"coatings may be particularly important in the newly developed curtain-type cushion structures where prolonged inflation (i.e. for several seconds) may be desired,"* thereby teaching if not alluding to the presence of the desired side curtain (roll-over) and thus are chemically and structurally equivalent, and consequently confirming the anticipation rejection made over claims 1-17 under 35 U.S.C. § 102 (e) as being anticipated by Li et al. - USPN 5,945,186.

In analysis of the Menzel et al. patent Applicant is correct in that Menzel et al. describe general airbags and not the specific side curtain airbag that Applicant now desires. The Examiner has thus amended this rejection to an obviousness type necessitated by Applicant's amendment and is set forth below in paragraph 6.

In response to the Double patenting rejections Applicants only other argument that the cited art (Li et al & Menzel et al.) and Application 09/501,467 do not employ a performed film and instead use a coating of the same chemical composition. To this the Examiner takes the position using a film instead of a coating is a methodical step that does not materially effect the final product, and that a skilled artisan would not be able to tell the difference as to whether a film coating was used or a resin coating was used because both inventions

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require that prior to the formation of the final product both applications require that simultaneous exposure of heat and pressure allow the coating or film which is atop the base fabric layer to become somewhat plastic and thus "cement" between (interstices) and to the individual yarns of the fabric and hold them in place so that the final product is impermeable. See Applicant's disclosure (pages 7, line 11, page 10, lines 14, page 11, line 2 and page 11 line 11).

Therefore, in lieu of the Examiner's rebuttal Applicant's arguments are found to be unconvincing.

***Claim Rejections - 35 USC § 102 (restated and maintained)***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (USPN 5,945,186. Li et al. disclose a coated base fabric for use in an airbag (abstract). Several types of airbags are employed by Li et al. that is, driver, passenger and side curtain type airbags (column 3, lines 8-11) and additionally states that coatings may be particularly important in the newly developed curtain-type cushion structures where prolonged inflation (i.e. for several seconds) may be desired. The coated base fabric includes a substrate, which is overcoated with a cross-linked elastomeric resin, which the Examiner is equating to be the equivalent to Applicant's film layer. It should be noted that the coating of Li et al.

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impregnates the fabric to form an impermeable barrier just as the film of the present invention does. Support for this deduction can be found in Applicant's own admission that the film requires heat and pressure in order for the film to cement between and to the individual yarns of the fabric (Applicant's disclosure page 11, line 14. Such resins may be without limitation selected from the group consisting essentially of polyamide, butyl rubber, EPDM, polyurethane, hydrogenated rubber, NBR, acrylic rubbers and mixtures thereof (column 2, lines 39-42). The coating weight is usually between 0.1 to 0.5 ounces per square yard (column 2, lines 33-35 and abstract). The substrate across which the cross-linked elastomeric resin coating is applied to form the airbag bag base fabric in accordance with the present invention is preferably a plain woven fabric formed from yarns comprising a polyamide (nylon 6, 6- column 4, line 65), or polyester fibers. Such yarns preferably have a linear density of about 210-630 denier. Such yarns are preferably formed of multiple filaments wherein the filaments have their own linear densities of 6 denier or less (column 3, lines 53-64).

Given that Li et al. meet each and every chemical and structural requirement set forth in the claims, then it must meet the property limitations of leak down time, tensile strength, elongation, packing volume factor and sliding coefficient of friction recited that depend from said requirements. In other words, it is reasonable to presume that the invention of Li et al. would inherently anticipate the physical properties of the present invention, since both inventions are comprised of coated fabrics coated with an elastomeric composition in an amount at most 2.5 ounces per square yard, said fabric being a woven polyamide, preferably a nylon 6,6 wherein the yarns have a linear density of 210-630 denier.

Since no other structural or chemical features are claimed which may distinguish the present invention from that of the Li et al. invention, the presently claimed physical

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properties that is leak down time, tensile strength, elongation, packing volume factor and sliding coefficient of friction are deemed to be inherent to the invention of Li et al. The burden is upon Applicant to prove otherwise. Note *In re Fitzgerald* 205 USPQ 495. Without a showing that evidences a difference between the prior art and the present invention, anticipation is proper. However, such evidence could support the proposition that the current claims are incomplete.

***Claim Rejections - 35 USC § 103(amended)***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 8-19, 22-39 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Menzel (USPN 5,110,666).

Menzel et al. disclose an airbag for use in motor vehicles made of a synthetic fabric coated with a thin layer of polyurethane coating (column 1, lines 12-15). The fabric substrate may be polyamide, preferably nylon or polyester woven or nonwoven (column 3, lines 19-65). Any denier, shape, weave configuration may be used in formulating the fabric depending upon the desired end result of the airbag (column 3, lines 19-27). In the working example shown in column 5, the airbag construction employs a 420 denier, nylon 6,6. The fabric substrate maybe selectively coated in the forms of stripes, dots, wavy lines, or other patterns to obtain the desired air permeabilities of the coated fabric (column 3, lines 19-27). For the lowest permeability the coating is applied to substantially cover the entire fabric. A coating weight of between 0.1 and 1 and preferably 0.25 to 0.75 ounces per square yard, which falls within

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Applicant's claimed range of at most 2.5 ounces per square yard. This coating enables the coated fabric to be lightweight, foldable and cuttable without fraying the fibers of the fabric (column 3, lines 28-34). The type and amount of coating to be applied will vary depending upon the end results desired (column 4, lines 1-7). In the same section of the patent, Menzel et al. alludes to the fact that if a heavier coating weights are required, a three head coater may be employed. The coating applied is a polycarbonate polyurethane, which may contain additives (column 4, lines 8-60). As the patent does not explicitly teach the airbag described to be a side curtain airbag, a skilled artisan would have found it obvious to employ the increased coating weight in an airbag to make a side curtain airbag. One would have been motivated to do this by the desire to attain an airbag which had greater impermeability, such as a side curtain airbag which necessitates that the air remain within the airbag for a longer period of time. Additionally, it should be noted that optimizing the amount of coating to make a fabric impermeable is a result effective variable. The greater the amount of coating applied affects the permeability of the woven cloth. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have coated the airbag with an amount of coating of at most 2.5 ounces per square yard, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized the coating, motivated by the desire to obtain a cloth that has high impermeable.

With regards to the physical properties claimed by Applicant, given that Menzel et al. meet each and every chemical and structural requirement set forth in the claims, then it must meet the property limitations of leak down time, tensile strength, elongation, packing volume factor and sliding coefficient of friction recited that depend from said requirements.



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In other words, it is reasonable to presume that the invention of Menzel et al. would inherently anticipate the physical properties of the present invention, since both inventions are comprised of coated fabrics coated with an elastomeric composition in an amount at most 2.5 ounces per square yard, said fabric being a woven polyamide, preferably a nylon 6,6 wherein the yarns have a linear density of 210-630 denier.

Since no other structural or chemical features are claimed which may distinguish the present invention from that of the Menzel et al. invention, the presently claimed physical properties of leak down time, tensile strength, elongation, packing volume factor and sliding coefficient of friction are deemed to be inherent to the invention of Menzel et al. The burden is upon Applicant to prove otherwise. Note *In re Fitzgerald* 205 USPQ 495.

***Double Patenting (restated and amended)***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F. 3d 1046, 29 USPQ 2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F. 2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F. 2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F. 2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F. 2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (c) may be used to overcome an actual or provisional rejection based in a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130 (b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73 (b).

8. Claims 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 8 of U.S. Patent No. 5,945,186. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference seen between the patent and the present Application is the variation in the range of the coating, and the way in which it is being applied. Both the 5,945,186 and the present Application are concerned with coating a polyamide fabric for use in airbags. They both require that the fabric be woven from polyamide yarns, preferably nylon 6,6, said yarns have a total linear density of 210-630 denier, a single filament which makes up the yarn to have a linear density of 4 denier or less and that the fabric is coated. The coating in both the patent and the present Application require that coating be a polyurethane. Thus, the difference between the patent and the present Application is that the patent only requires the coating weight to be present in the range of 0.1 to 0.5 ounces per square yard and the present Application requires the same coating to be in an amount of at most 2.7 ounces per square yard. It should be noted that the Examiner is equating the film coating to be equivalent to the resin coating employed by the patent. Both coatings whether present in a film form or as a resin, both impregnate the fabric to form an impermeable barrier, making the final product in both structurally and chemically the same. Therefore, the present Application encompasses the range 0.1 to 0.5 ounces per square yard as that taught by US Patent 5,945,186.

Furthermore, a skilled artisan would have found it obvious to have employed the increased coating weight in an airbag, motivated by the desire to attain an airbag which had

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greater impermeability, such as a side curtain airbag which necessitates that the air remain within the airbag for a longer period of time.

9. Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7, 10-20, 24-33 and 35-39 of copending Application No. 09/501,467. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of Application 09/501,467 are drawn to an airbag cushion comprising a coated fabric whereas the present Application 09/557,643 is drawn to a side curtain airbag cushion comprising a fabric laminated with a film. Both applications require the same structure and chemistry for the airbag fabric and its coating. However, Application 09/501,467 refers to the coating as an elastomeric composition, that is a resin, whereas the present Application 09/557,643 refers to the same as a film. As set forth above the Examiner takes the position that the coating whether it is a film or a resin is accomplishing the same task, which is to chemically impregnate the fabric layer to form an impermeable barrier. Additionally, the disclosure of 09/557,643 states that these two terms are used synonymously. The film coating is actually a methodical step and would have no effect on the end result of the final airbag cushion that is produced.

Further the present Application claims a coating weight of "at most 2.7 ounces per square yard in the form of a film whereas, Application 09/501,467 claims a coating in the form of a resin in an amount of at most 2.5 ounces per square yard. Therefore, the claimed coating weight of 2.5 ounces per square yard as set forth by Application 09/501,467 falls within the claimed coating range of 2.7 ounces per square yard of Application 09/557,643.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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**Conclusion**

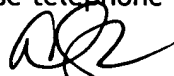
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti R. Singh whose telephone number is 703-305-0291. The examiner can normally be reached on M-F 7:00am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-873-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

 4/19/03

Ms. Arti R. Singh  
Patent Examiner  
Art Unit 1771